



SEQUENCE LISTING

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<110> Moskal, Joseph
Hamamoto, Hirotaka

<111> Detection and Treatment of Glyco-Enzyme-Related Disease

<121> 37,186-D

<131> 09/587,604

<141> 2000-06-20

<161> 20

<171> PatentIn version 3.1

<211> 1

<212> 20

<213> DNA

<214> Artificial Sequence

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<402> alpha 2,3-ST sense primer

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<412> 17

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<414> Artificial Sequence

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<421> alpha 2,3-ST antisense primer

<430> 2

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<440> 3

<441> 22

<442> DNA

<443> Artificial Sequence

<450>

<451> FAK sense primer

<460> 3

cttgagctg cttaccttga cc

22

<470> 4

<471> 21

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<473> Artificial Sequence

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 <223> FAX antisense primer

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21

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 <212> DNA
 <213> Homo sapiens

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 <223> 2,3 DNA

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 <212> PRT
 <213> Homo sapiens

<220>
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 <223> 2,3 Protein

<400> 6

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Phe Leu Val Leu Gly Phe Leu Tyr Tyr Ser Ala Trp Lys Leu His Leu
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Leu Gln Trp Glu Glu Asp Ser Asn Ser Val Val Leu Ser Phe Asp Ser
 35 40 45

Ala Gly Gln Thr Leu Gly Ser Glu Tyr Asp Arg Leu Gly Phe Leu Leu
 50 55 60

Asn Leu Asp Ser Lys Leu Pro Ala Glu Leu Ala Thr Lys Tyr Ala Asn
 65 70 75 80

Phe Ser Glu Gly Ala Cys Lys Pro Gly Tyr Ala Ser Ala Leu Met Thr
 85 90 95

Ala Ile Phe Pro Arg Phe Ser Lys Pro Ala Pro Met Phe Leu Asp Asp
 100 105 110

Ser Phe Arg Lys Trp Ala Arg Ile Arg Glu Phe Val Pro Pro Phe Gly
 115 120 125

Ile Lys Gly Gln Asp Asn Leu Ile Lys Ala Ile Leu Ser Val Thr Lys
 130 135 140

Glu Tyr Arg Leu Thr Pro Ala Leu Asp Ser Leu Arg Cys Arg Arg Cys
 145 150 155 160

Ile Ile Val Gly Asn Gly Gly Val Leu Ala Asn Lys Ser Leu Gly Ser
 165 170 175

Arg Ile Asp Asp Tyr Asp Ile Val Val Arg Leu Asn Ser Ala Pro Val

180

185

190

Lys Gly Phe Glu Lys Asp Val Gly Ser Lys Thr Thr Leu Arg Ile Thr
195 200 205

Tyr Pro Glu Gly Ala Met Gln Arg Pro Glu Gln Tyr Glu Arg Asp Ser
210 215 220

Leu Phe Val Leu Ala Gly Phe Lys Trp Gln Asp Phe Lys Trp Leu Lys
225 230 235 240

Tyr Ile Val Tyr Lys Glu Arg Val Ser Ala Ser Asp Gly Phe Trp Lys
245 250 255

Ser Val Ala Thr Arg Val Pro Lys Glu Pro Pro Glu Ile Arg Ile Leu
260 265 270

Asn Pro Tyr Phe Ile Gln Glu Ala Ala Phe Thr Leu Ile Gly Leu Pro
275 280 285

Phe Asn Asn Gly Leu Met Gly Arg Gly Asn Ile Pro Thr Leu Gly Ser
290 295 300

Val Ala Val Thr Met Ala Leu His Gly Cys Asp Glu Val Ala Val Ala
305 310 315 320

Gly Phe Gly Tyr Asp Met Ser Thr Pro Asn Ala Pro Leu His Tyr Tyr
325 330 335

Glu Thr Val Arg Met Ala Ala Ile Lys Glu Ser Trp Thr His Asn Ile
340 345 350

Gln Arg Glu Lys Glu Phe Leu Arg Lys Leu Val Lys Ala Arg Val Ile
355 360 365

Thr Asp Leu Ser Ser Gly Ile
370 375

<210> 7

<211> 1839

<212> DNA

<213> Homo sapiens

<220>

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 <223> Hex E DNA

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 gcgctgctgt tggcgacaat gctggcgggg atgttgggcg tgcgactca ggtggcgctg 180
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 <212> PRT
 <213> Homo sapiens

<220>
 <221> misc_feature
 <223> HexB Polypeptide

<400> 8

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Leu Leu Leu Ala Thr Leu Leu Ala Ala Met Leu Ala Leu Leu Thr Gln
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Val Ala Leu Val Val Gln Val Ala Glu Ala Ala Arg Ala Pro Ser Val
 35 40 45

Ser Ala Lys Pro Gly Pro Ala Leu Trp Pro Leu Pro Leu Ser Val Lys
 50 55 60

Met Thr Pro Asn Leu Leu His Leu Ala Pro Glu Asn Phe Tyr Ile Ser
 65 70 75 80

His Ser Pro Asn Ser Thr Ala Gly Pro Ser Cys Thr Leu Leu Glu Glu
 85 90 95

Ala Phe Arg Arg Tyr His Gly Tyr Ile Phe Gly Phe Tyr Lys Trp His
 100 105 110

His Glu Pro Ala Glu Phe Gln Ala Lys Thr Gln Val Gln Gln Leu Leu
 115 120 125

Val Ser Ile Thr Leu Gln Ser Glu Cys Asp Ala Phe Pro Asn Ile Ser
 130 135 140

Ser Asp Glu Ser Tyr Thr Leu Leu Val Lys Glu Pro Val Ala Val Leu
 145 150 155 160

Lys Ala Asn Arg Val Trp Gly Ala Leu Arg Gly Leu Glu Thr Phe Ser
 165 170 175

Gln Leu Val Tyr Gln Asp Ser Tyr Gly Thr Phe Thr Ile Asn Glu Ser
 180 185 190

Thr Ile Ile Asp Ser Pro Arg Phe Ser His Arg Gly Ile Leu Ile Asp
 195 200 205

Thr Ser Arg His Tyr Leu Pro Val Lys Ile Ile Leu Lys Thr Leu Asp
 210 215 220

Ala Met Ala Phe Asn Lys Phe Asn Val Leu His Trp His Ile Val Asp
 225 230 235 240

Asp Gln Ser Phe Pro Tyr Gln Ser Ile Thr Phe Pro Glu Leu Ser Asn
 245 250 255

Lys Gly Ser Tyr Ser Leu Ser His Val Tyr Thr Pro Asn Asp Val Arg
 260 265 270

Met Val Ile Glu Tyr Ala Arg Leu Arg Gly Ile Arg Val Leu Pro Glu
 275 280 285

Phe Asp Thr Pro Gly His Thr Leu Ser Trp Gly Lys Gly Gln Lys Asp
 290 295 300

Leu Leu Thr Pro Cys Tyr Ser Arg Gln Asn Lys Leu Asp Ser Phe Gly
 305 310 315 320

Pro Ile Asn Pro Thr Leu Asn Thr Thr Tyr Ser Phe Leu Thr Thr Phe
 325 330 335

Phe Lys Glu Ile Ser Glu Val Phe Pro Asp Gln Phe Ile His Leu Gly
 340 345 350

Gly Asp Glu Val Glu Phe Lys Cys Trp Glu Ser Asn Pro Lys Ile Gln
 355 360 365

Asp Phe Met Arg Gln Lys Gly Phe Gly Thr Asp Phe Lys Lys Leu Glu
 370 375 380

Ser Phe Tyr Ile Gln Lys Val Leu Asp Ile Ile Ala Thr Ile Asn Lys
 385 390 395 400

Gly Ser Ile Val Trp Gln Glu Val Phe Asp Asp Lys Ala Lys Leu Ala
 405 410 415

Pro Gly Thr Ile Val Glu Val Trp Lys Asp Ser Ala Tyr Pro Glu Glu
 420 425 430

Leu Ser Arg Val Thr Ala Ser Gly Phe Pro Val Ile Leu Ser Ala Pro
 435 440 445

Trp Tyr Leu Asp Leu Ile Ser Tyr Gly Gln Asp Trp Arg Lys Tyr Tyr
 450 455 460

Lys Val Glu Pro Leu Asp Phe Gly Gly Thr Gln Lys Gln Lys Gln Leu
 465 470 475 480

Phe Ile Gly Gly Glu Ala Cys Leu Trp Gly Glu Tyr Val Asp Ala Thr
 485 490 495

Asn Leu Thr Pro Arg Leu Trp Pro Arg Ala Ser Ala Val Gly Glu Arg
 500 505 510

Leu Trp Ser Ser Lys Asp Val Arg Asp Met Asp Asp Ala Tyr Asp Arg
 515 520 525

Leu Thr Arg His Arg Cys Arg Met Val Glu Arg Gly Ile Ala Ala Gln
 530 535 540

Pro Leu Tyr Ala Gly Tyr Cys Asn His Glu Asn Met
 545 550 555

2109 9
 2110 2007
 2120 DNA
 2130 Homo sapiens

2220
 2221 misc_feature
 2223 Fuco DNA

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ctgtctttttt aagtatgato aaataaa 2000

#210: 10
#211: 461
#212: PRT
#213: Homo sapiens

#220:
#221: misc_feature
#223: Fuco Polypeptide

#400: 10

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1 5 10 15

Leu Gly Ala Ala Glu Ser Val Arg Arg Ala Gln Pro Pro Arg Arg Tyr
20 25 30

Thr Pro Asp Trp Pro Ser Leu Asp Ser Arg Pro Leu Pro Ala Trp Phe
35 40 45

Asp Glu Ala Lys Phe Gly Val Phe Ile His Trp Gly Val Phe Ser Val
50 55 60

Pro Ala Trp Gly Ser Glu Trp Phe Trp Trp His Trp Gln Gly Glu Gly
65 70 75 80

Arg Pro Gln Tyr Gln Arg Phe Met Arg Asp Asn Tyr Pro Pro Gly Phe
85 90 95

Ser Tyr Ala Asp Phe Gly Pro Gln Phe Thr Ala Arg Phe Phe His Pro
100 105 110

Glu Glu Trp Ala Asp Leu Phe Gln Ala Ala Gly Ala Lys Tyr Val Val
115 120 125

Leu Thr Thr Lys His His Glu Gly Phe Thr Asn Trp Pro Ser Pro Val
 130 135 140

Ser Trp Asn Trp Asn Ser Lys Asp Val Gly Pro His Arg Asp Leu Val
 145 150 155 160

Gly Glu Leu Gly Thr Ala Leu Arg Lys Arg Asn Ile Arg Tyr Gly Leu
 165 170 175

Tyr His Ser Leu Leu Glu Trp Phe His Pro Leu Tyr Leu Leu Asp Lys
 180 185 190

Lys Asn Gly Phe Lys Thr Gln His Phe Val Ser Ala Lys Thr Met Pro
 195 200 205

Glu Leu Tyr Asp Leu Val Asn Ser Tyr Lys Pro Asp Leu Ile Trp Ser
 210 215 220

Asp Gly Glu Trp Glu Cys Pro Asp Thr Tyr Trp Asn Ser Thr Asn Phe
 225 230 235 240

Leu Ser Trp Leu Tyr Asn Asp Ser Pro Val Lys Asp Glu Val Val Val
 245 250 255

Asn Asp Arg Trp Gly Gln Asn Ser Ser Cys His His Gly Gly Tyr Tyr
 260 265 270

Asn Cys Glu Asp Lys Phe Lys Pro Gln Ser Leu Pro Asp His Lys Trp
 275 280 285

Glu Met Cys Thr Ser Ile Asp Lys Phe Ser Trp Gly Tyr Arg Arg Asp
 290 295 300

Met Ala Leu Ser Asp Val Thr Glu Glu Ser Glu Ile Ile Ser Glu Leu
 305 310 315 320

Val Gln Thr Val Ser Leu Gly Gly Asn Tyr Leu Leu Asn Ile Gly Pro
 325 330 335

Thr Lys Asp Gly Leu Ile Val Pro Ile Phe Gln Glu Arg Leu Leu Ala
 340 345 350

Val Gly Lys Trp Leu Ser Ile Asn Gly Glu Ala Ile Tyr Ala Ser Lys
 355 360 365

Pro Trp Arg Val Gln Trp Glu Lys Asn Thr Thr Ser Val Trp Tyr Thr
 370 375 380

Ser Lys Gly Ser Ala Val Tyr Ala Ile Phe Leu His Trp Pro Glu Asn
 385 390 395 400

Gly Val Leu Asn Leu Glu Ser Pro Ile Thr Thr Ser Thr Thr Lys Ile
 405 410 415

Thr Met Leu Gly Ile Gln Gly Asp Leu Lys Trp Ser Thr Asp Pro Asp
 420 425 430

Lys Gly Leu Phe Ile Ser Leu Pro Gln Leu Pro Pro Ser Ala Val Pro
 435 440 445

Ala Glu Phe Ala Trp Thr Ile Lys Leu Thr Gly Val Lys
 450 455 460

410 11
 411 1765
 412 DNA
 413 Homo sapiens

4120
 4121 misc_feature
 4123 Slex-T

411 11
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 gaaaaaaaaa aaaaaaaaaa aaaaaa 1766

210 12
 211 329
 212 PFT
 213 Homo sapiens

220
 221 misc_feature
 223 Slex-T

400 12

Met Val Ser Lys Ser Arg Trp Lys Leu Leu Ala Met Leu Ala Leu Val

1 5 10 15
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 20 25 30
 Phe Pro Ile Pro Glu Lys Lys Glu Pro Cys Leu Gln Gly Glu Ala Glu
 35 40 45
 Ser Lys Ala Ser Lys Leu Phe Gly Asn Tyr Ser Arg Asp Gln Pro Ile
 50 55 60
 Phe Leu Arg Leu Glu Asp Tyr Phe Trp Val Lys Thr Pro Ser Ala Tyr
 65 70 75 80
 Glu Leu Pro Tyr Gly Thr Lys Gly Ser Glu Asp Leu Leu Leu Arg Val
 85 90 95
 Leu Ala Ile Thr Ser Ser Ser Ile Pro Lys Asn Ile Gln Ser Leu Arg
 100 105 110
 Cys Arg Arg Cys Val Val Val Gly Asn Gly His Arg Leu Arg Asn Ser
 115 120 125
 Ser Leu Gly Asp Ala Ile Asn Lys Tyr Asp Val Val Ile Arg Leu Asn
 130 135 140
 Asn Ala Pro Val Ala Gly Tyr Glu Gly Asp Val Gly Ser Lys Thr Thr
 145 150 155 160
 Met Arg Leu Phe Tyr Pro Glu Ser Ala His Phe Asp Pro Lys Val Glu
 165 170 175
 Asn Asn Pro Asp Thr Leu Leu Val Leu Val Ala Phe Lys Ala Met Asp
 180 185 190
 Phe His Trp Ile Glu Thr Ile Leu Ser Asp Lys Lys Arg Val Arg Lys
 195 200 205
 Gly Phe Trp Lys Gln Pro Pro Leu Ile Trp Asp Val Asn Pro Lys Gln
 210 215 220
 Ile Arg Ile Leu Asn Pro Phe Phe Met Glu Ile Ala Ala Asp Lys Leu
 225 230 235 240

Leu Ser Leu Pro Met Gln Gln Pro Arg Lys Ile Lys Gln Lys Pro Thr
245 250 255

Thr Gly Leu Leu Ala Ile Thr Leu Ala Leu His Leu Cys Asp Leu Val
260 265 270

His Ile Ala Gly Phe Gly Tyr Pro Asp Ala Tyr Asn Lys Lys Gln Thr
275 280 285

Ile His Tyr Tyr Glu Gln Ile Thr Leu Lys Ser Met Ala Gly Ser Gly
290 295 300

His Asn Val Ser Gln Glu Ala Leu Ala Ile Lys Arg Met Leu Glu Met
305 310 315 320

Gly Ala Ile Lys Asn Leu Thr Ser Phe
325

110: 13
111: 2937
112: DNA
113: Homo sapiens

120:
121: misc_feature
123: GnT-I

4400: 13
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ccccacagaaa gggctggcga gtcgaaaggc gaggcggccg cggcagcgct tgggacgcgc 300
ctgggcacgc ggctcgctcc ctgcgccccg gaggcggcca agttcggggc caggacgtcg 360
gcaggacctg gtgcattggt gctcctaata cccatagtc agaggaggca tccctaggac 420
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 <213> Homo sapiens

220
 221 misc_feature
 223 GnT-I

<400> 14

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Ala Pro Gly Arg Pro Pro Ser Val Ser Ala Leu Asp Gly Asp Pro Ala
 35 40 45

Ser Leu Thr Arg Glu Val Ile Arg Leu Ala Gln Asp Ala Glu Val Glu
 50 55 60

Leu Glu Arg Gln Arg Gly Leu Leu Gln Gln Ile Gly Asp Ala Leu Ser
 65 70 75 80

Ser Gln Arg Gly Arg Val Pro Thr Ala Ala Pro Pro Ala Gln Pro Arg
 85 90 95

Val Pro Val Thr Pro Ala Pro Ala Val Ile Pro Ile Leu Val Ile Ala
100 105 110

Cys Asp Arg Ser Thr Val Arg Arg Cys Leu Asp Lys Leu Leu His Tyr
115 120 125

Arg Pro Ser Ala Glu Leu Phe Pro Ile Ile Val Ser Gln Asp Cys Gly
130 135 140

His Glu Glu Thr Ala Gln Ala Ile Ala Ser Tyr Gly Ser Ala Val Thr
145 150 155 160

His Ile Arg Gln Pro Asp Leu Ser Ser Ile Ala Val Pro Pro Asp His
165 170 175

Arg Lys Phe Gln Gly Tyr Tyr Lys Ile Ala Arg His Tyr Arg Trp Ala
180 185 190

Leu Gly Gln Val Phe Arg Gln Phe Arg Phe Pro Ala Ala Val Val Val
195 200 205

Glu Asp Asp Leu Glu Val Ala Pro Asp Phe Phe Glu Tyr Phe Arg Ala
210 215 220

Thr Tyr Pro Leu Leu Lys Ala Asp Pro Ser Leu Trp Cys Val Ser Ala
225 230 235 240

Trp Asn Asp Asn Gly Lys Glu Gln Met Val Asp Ala Ser Arg Pro Glu
245 250 255

Leu Leu Tyr Arg Thr Asp Phe Phe Pro Gly Leu Gly Trp Leu Leu Leu
260 265 270

Ala Glu Leu Trp Ala Glu Leu Glu Pro Lys Trp Pro Lys Ala Phe Trp
275 280 285

Asp Asp Trp Met Arg Arg Pro Glu Gln Arg Gln Gly Arg Ala Cys Ile
290 295 300

Arg Pro Glu Ile Ser Arg Thr Met Thr Phe Gly Arg Lys Gly Val Ser
305 310 315 320

His Gly Gln Phe Phe Asp Gln His Leu Lys Phe Ile Lys Leu Asn Gln
 325 330 335

Gln Phe Val His Phe Thr Gln Leu Asp Leu Ser Tyr Leu Gln Arg Glu
 340 345 350

Ala Tyr Asp Arg Asp Phe Leu Ala Arg Val Tyr Gly Ala Pro Gln Leu
 355 360 365

Gln Val Glu Lys Val Arg Thr Asn Asp Arg Lys Glu Leu Gly Glu Val
 370 375 380

Arg Val Gln Tyr Thr Gly Arg Asp Ser Phe Lys Ala Phe Ala Lys Ala
 385 390 395 400

Leu Gly Val Met Asp Asp Leu Lys Ser Gly Val Pro Arg Ala Gly Tyr
 405 410 415

Arg Gly Ile Val Thr Phe Gln Phe Arg Gly Arg Arg Val His Leu Ala
 420 425 430

Pro Pro Pro Thr Trp Glu Gly Tyr Asp Pro Ser Trp Asn
 435 440 445

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<220>
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 <222> GnT-III

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<212> PRT
<213> Homo sapiens

<220>
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<223> GnT-III

<400> 16

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Leu Ile Ser Phe Leu His Phe Phe Lys Thr Leu Ser Tyr Val Thr Phe
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Pro Arg Glu Leu Ala Ser Leu Ser Pro Asn Leu Val Ser Ser Phe Phe
35 40 45

Trp Asn Asn Ala Pro Val Thr Pro Gln Ala Ser Pro Glu Pro Gly Gly
50 55 60

Pro Asp Leu Leu Arg Thr Pro Leu Tyr Ser His Ser Pro Leu Leu Gln
65 70 75 80

Pro Leu Pro Pro Ser Lys Ala Ala Glu Glu Leu His Arg Val Asp Leu
85 90 95

Val Leu Pro Glu Asp Thr Thr Glu Tyr Phe Val Arg Thr Lys Ala Gly
100 105 110

Gly Val Cys Phe Lys Pro Gly Thr Lys Met Leu Glu Arg Pro Pro Pro
115 120 125

Gly Arg Pro Glu Glu Lys Pro Glu Gly Ala Asn Gly Ser Ser Ala Arg
130 135 140

Arg Pro Pro Arg Tyr Leu Leu Ser Ala Arg Glu Arg Thr Gly Gly Arg

148

150

155

160

Gly Ala Arg Arg Lys Trp Val Glu Cys Val Cys Leu Pro Gly Trp His
165 170 175

Gly Pro Ser Cys Gly Val Pro Thr Val Val Gln Tyr Ser Asn Leu Pro
180 185 190

Thr Lys Glu Arg Leu Val Pro Arg Glu Val Pro Arg Arg Val Ile Asn
195 200 205

Ala Ile Asn Val Asn His Glu Phe Asp Leu Leu Asp Val Arg Phe His
210 215 220

Glu Leu Gly Asp Val Val Asp Ala Phe Val Val Cys Glu Ser Asn Phe
225 230 235 240

Thr Ala Tyr Gly Glu Pro Arg Pro Leu Lys Phe Arg Glu Met Leu Thr
245 250 255

Asn Gly Thr Phe Glu Tyr Ile Arg His Lys Val Leu Tyr Val Phe Leu
260 265 270

Asp His Phe Pro Pro Gly Gly Arg Gln Asp Gly Trp Ile Ala Asp Asp
275 280 285

Tyr Leu Arg Thr Phe Leu Thr Gln Asp Gly Val Ser Arg Leu Arg Asn
290 295 300

Leu Arg Pro Asp Asp Val Phe Ile Ile Asp Asp Ala Asp Glu Ile Pro
305 310 315 320

Ala Arg Asp Gly Val Leu Phe Leu Lys Leu Tyr Asp Gly Trp Thr Glu
325 330 335

Pro Phe Ala Phe His Met Arg Thr Ser Leu Tyr Gly Phe Phe Trp Lys
340 345 350

Gln Pro Gly Thr Leu Glu Val Val Ser Gly Cys Thr Val Asp Met Leu
355 360 365

Gln Ala Val Tyr Gly Leu Asp Gly Ile Arg Leu Arg Arg Arg Gln Tyr
370 375 380

Tyr Thr Met Pro Asn Phe Arg Gln Tyr Glu Asn Arg Thr Gly His Ile
 385 390 395 400

Leu Val Gln Trp Ser Leu Gly Ser Pro Leu His Phe Ala Gly Trp His
 405 410 415

Cys Ser Trp Cys Phe Thr Pro Glu Gly Ile Tyr Phe Lys Leu Val Ser
 420 425 430

Ala Gln Asn Gly Asp Phe Pro Arg Trp Gly Asp Tyr Glu Asp Lys Arg
 435 440 445

Asp Leu Asn Tyr Ile Arg Gly Leu Ile Arg Thr Gly Gly Trp Phe Asp
 450 455 460

Gly Thr Gln Gln Glu Tyr Pro Pro Ala Asp Pro Ser Glu His Met Tyr
 465 470 475 480

Ala Pro Lys Tyr Leu Leu Lys Asn Tyr Asp Arg Phe His Tyr Leu Leu
 485 490 495

Asp Asn Pro Tyr Gln Glu Pro Arg Ser Thr Ala Ala Gly Gly Trp Arg
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His Arg Gly Pro Glu Gly Arg Pro Pro Ala Arg Gly Lys Leu Asp Glu
 515 520 525

Ala Glu Val
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gatgacagot ctccccagga atootgotgo ctgotgagaa acatgggtoag caagtccogo	181
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 <212> PRT
 <213> Homo sapiens

<220>
 <221> misc_feature
 <223> GAT-T

<400> 18

Met Val Ser Lys Ser Arg Trp Lys Leu Leu Ala Met Leu Ala Leu Val
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Leu Val Val Met Val Trp Tyr Ser Ile Ser Arg Glu Asp Ser Phe Tyr
 20 25 30

Phe Pro Ile Pro Glu Lys Lys Glu Pro Cys Leu Gln Gly Glu Ala Glu
 35 40 45

Ser Lys Ala Ser Lys Leu Phe Gly Asn Tyr Ser Arg Asp Gln Pro Ile
 50 55 60

Phe Leu Arg Leu Glu Asp Tyr Phe Trp Val Lys Thr Pro Ser Ala Tyr
 65 70 75 80

Glu Leu Pro Tyr Gly Thr Lys Gly Ser Glu Asp Leu Leu Leu Arg Val
 85 90 95

Leu Ala Ile Thr Ser Ser Ser Ile Pro Lys Asn Ile Gln Ser Leu Arg
 100 105 110

Cys Arg Arg Cys Val Val Val Gly Asn Gly His Arg Leu Arg Asn Ser
 115 120 125

Ser Leu Gly Asp Ala Ile Asn Lys Tyr Asp Val Val Ile Arg Leu Asn
 130 135 140

Asn Ala Pro Val Ala Gly Tyr Glu Gly Asp Val Gly Ser Lys Thr Thr
 145 150 155 160

Met Arg Leu Phe Tyr Pro Glu Ser Ala His Phe Asp Pro Lys Val Glu
 165 170 175

Asn Asn Pro Asp Thr Leu Leu Val Leu Val Ala Phe Lys Ala Met Asp

180

185

190

Phe His Trp Ile Glu Thr Ile Leu Ser Asp Lys Lys Arg Val Arg Lys
195 200 205

Gly Phe Trp Lys Gln Pro Pro Leu Ile Trp Asp Val Asn Pro Lys Gln
210 215 220

Ile Arg Ile Leu Asn Pro Phe Phe Met Glu Ile Ala Ala Asp Lys Leu
225 230 235 240

Leu Ser Leu Pro Met Gln Gln Pro Arg Lys Ile Lys Gln Lys Pro Thr
245 250 255

Thr Gly Leu Leu Ala Ile Thr Leu Ala Leu His Leu Cys Asp Leu Val
260 265 270

His Ile Ala Gly Phe Gly Tyr Pro Asp Ala Tyr Asn Lys Lys Gln Thr
275 280 285

Ile His Tyr Tyr Glu Gln Ile Thr Leu Lys Ser Met Ala Gly Ser Gly
290 295 300

His Asn Val Ser Gln Glu Ala Leu Ala Ile Lys Arg Met Leu Glu Met
305 310 315 320

Gly Ala Ile Lys Asn Leu Thr Ser Phe
325

<210> 19
<211> 2956
<212> DNA
<213> Rat

<220>
<221> misc_feature
<222> rat alpha 2, 6-ST

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 acagtttca ggtctagacc tgagacggct ttctctctct tagactcaat gatccttaaa 2700
 tattagaggt tgattttctg agacacttcc aagcatccat aaataccttg gcacaatgat 2760
 tcaagctaa aaccaagctg cattgagtgt tttagagctg gaaatgacaa aacacctcac 2820
 ctgtcccaac togacagggc ttctctacga ttaagggtca tgctaactca ttaagatgtg 2880
 catcttctct accctctgca cccattttga tatccacac ccgacccat aagctttgcc 2940
 cagccccat cgtgcc 2956

210 : 20
 211 : 395
 212 : FRT
 213 : Rat

220 :
 221 : misc_feature
 223 : rat alpha 2, 6-ST

2400 : 20

Met Ala Cys Ile Leu Lys Arg Lys Prc Ala Leu Ala Val Ser Phe Ile
 1 5 10 15

Ala Leu Cys Ile Leu Leu Leu Ala Met Arg Leu Ala Asn Asp Val Thr
 20 25 30

Phe Pro Leu Leu Leu Asn Cys Phe Gly Gln Pro Lys Thr Lys Trp Ile
 35 40 45

Pro Leu Ser Tyr Thr Leu Arg Gln Pro Leu Gln Thr His Tyr Gly Tyr
 50 55 60

Ile Asn Val Arg Thr Gln Glu Pro Leu Gln Leu Asn Cys Asn His Cys
 65 70 75 80

Ala Val Val Ser Asn Ser Gly Gln Met Val Gly Gln Lys Val Gly Glu
 85 90 95

Glu Ile Asp Arg Ala Ser Cys Ile Trp Arg Met Asn Asn Ala Pro Thr
 100 105 110

Lys Gly Phe Glu Glu Asp Val Gly Tyr Met Thr Met Val Arg Val Val
 115 120 125

Ser His Thr Ser Val Pro Leu Leu Leu Lys Asn Pro Asp Tyr Phe Phe
 130 135 140

Lys Glu Ala Ser Thr Thr Ile Tyr Val Ile Trp Gly Pro Phe Arg Asn
 145 150 155 160

Met Arg Lys Asp Gly Asn Gly Ile Val Tyr Asn Met Leu Lys Lys Thr
 165 170 175

Val Asp Ala Tyr Pro Asp Ala Gln Ile Tyr Val Thr Thr Glu Gln Arg
 180 185 190

Met Thr Tyr Cys Asp Gly Val Phe Lys Asp Glu Thr Gly Lys Asp Arg
 195 200 205

Val Gln Ser Gly Ser Tyr Leu Ser Thr Gly Trp Phe Thr Phe Ile Leu
 210 215 220

Ala Met Asp Ala Cys Tyr Ser Ile His Val Tyr Gly Met Ile Asn Glu
 225 230 235 240

Thr Tyr Cys Thr Thr Glu Gly Tyr Arg Lys Val Pro Tyr His Tyr Tyr
 245 250 255

Glu Gln Gly Lys Asp Glu Cys Asn Glu Tyr Leu Leu His Glu His Ala

260

265

270

Pro Tyr Gly Gly His Arg Phe Ile Thr Glu Lys Lys Val Phe Ala Lys
 275 280 285

Trp Ala Lys Lys His Arg Ile Val Phe Thr His Pro Asn Trp Thr Val
 290 295 300

Ser
 305